

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Please cancel claim 1 without prejudice or disclaimer.

Please add new claims 45-79.

Listing of Claims:

1-44 (Canceled)

45. (New)An image heating device comprising:

a heat generating body that is rotatable and has electrical conductivity;

an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction; and

a core made of magnetic material arranged on a rear side of the exciting coil,

wherein the length of the exciting coil along the direction of the rotation axis of the heat generating body is not shorter than the width of a recording material having the maximum width in all the recording materials to be used; and

the length of the core along the direction of the rotation axis of the heat generating body is not shorter than the width of the recording material having the maximum width of all the recording materials to be used.

46. (New)An image heating device comprising:

a heat generating body that is rotatable and has electrical conductivity;

an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction; and

a core made of magnetic material arranged on a rear side of the exciting coil, wherein the core has opposing portions opposed to the heat generating body without interposing the exciting coil between the opposing portion and the heat generating body, and magnetic permeable portions opposed to the heat generating body via the exciting coil, and

wherein the length between the outermost ends of the magnetic permeable portion along the direction of the rotation axis of the heat generating body is not longer than the length between the outermost ends of the opposing portion along the direction of the rotation axis of the heat generating body.

47. (New)An image heating device comprising:

a heat generating body that is rotatable and has electrical conductivity;

an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction; and

a core made of magnetic material arranged on a rear side of the exciting coil,

wherein a part of the core is divided, thereby forming a movable portion and the movable portion is held movably with respect to the remaining portion of the core.

48. (New)The image heating device according to claim 47, wherein the movable portion is arranged outside the region in which a recording material to be used passes through and is allowed to be movable with respect to the remaining portion of the core.

49. (New)The image heating device according to claim 48, wherein the movable portion is arranged outside the region in which the recording material whose width is shorter than the width of the recording material having the maximum width in all the recording materials to be used.

50. (New)An image heating device comprising:

- a heat generating body that is rotatable and has electrical conductivity;

- an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction;

- a core made of magnetic material arranged on a rear side of the exciting coil; and

- a shielding member made of conductive material covering at least a part of an outside of the heat generating body.

51. (New)An image heating device comprising:

- a heat generating body that is rotatable and has electrical conductivity;

- an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction;

a core made of magnetic material arranged on a rear side of the exciting coil; and
a cooling member for cooling the core from the side of the rear face.

52. (New)An image heating device comprising:

a heat generating body that is rotatable and has electrical conductivity; and
an exciting coil arranged in opposition to the peripheral surface of the heat
generating body and adapted for allowing the heat generating body to generate heat with
electromagnetic induction;

further comprising a core made of magnetic material arranged on a rear side of the
exciting coil, and the length of the core along the direction of the rotation axis of the heat
generating body is not shorter than the width of a recording material having the
maximum width of all the recording materials to be used.

53. (New)An image heating device comprising:

a heat generating body that is rotatable and has electrical conductivity; and
an exciting coil arranged in opposition to the peripheral surface of the heat
generating body and adapted for allowing the heat generating body to generate heat with
electromagnetic induction;

further comprising a core made of magnetic material arranged in a state in which
the exciting coil is existed between the core and the heat generating body, the core has
opposing portions opposed to the heat generating body without interposing the exciting
coil between the opposing portion and the heat generating body, and magnetic permeable
portions opposed to the heat generating body via the exciting coil,

wherein at least a part of the opposing portion is arranged in closer contact with the heat generating body than the magnetic permeable portion, thereby forming an adjacent portion, and at least a part of the core has gaps in the direction of the rotation axis of the heat generating body.

54. (New)The image heating device according to claim 55, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

55. (New) An image heating device comprising:

a heat generating body that is rotatable and has electrical conductivity; and
an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction,

wherein the exciting coil is composed of a bundle of wires, which are extended in the direction of the rotation axis of the heat generating body,

wherein a larger number of bundled wires are superimposed at both ends in a direction away from the heat generating body than at the central portion in the direction of the rotation axis of the heat generating body, and

wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

56. (New)An image heating device comprising:

a fixing belt having conductivity;
a supporting roller movably suspending the fixing belt; and
an exciting coil arranged in opposition to the peripheral surface of the fixing belt
and adapted for allowing the fixing belt to generate heat with electromagnetic induction,
wherein the width of the fixing belt is not longer than the length of the exciting
coil at the outer peripheral portion along the direction of the rotation axis of the
supporting roller and is not shorter than the width of a recording material having the
maximum width in all the recording materials to be used.

57. (New)An image heating device comprising:

a fixing belt having conductivity;
a supporting roller movably suspending the fixing belt;
an exciting coil arranged in opposition to the peripheral surface of the fixing belt
and adapted for allowing the fixing belt to generate heat with electromagnetic induction;
and
a core made of magnetic material arranged on a rear side of the exciting coil,
wherein the length of the core along the direction of the rotation axis of the
supporting roller is not longer than the width of the fixing belt and is not shorter than the
width of a recording material having the maximum width in all the recording materials to
be used.

58. (New)An image heating device comprising:

a fixing belt having conductivity;

a supporting roller movably suspending the fixing belt;

an exciting coil arranged in opposition to the peripheral surface of the fixing belt and adapted for allowing the fixing belt to generate heat with electromagnetic induction; and

a core made of magnetic material arranged on a rear side of the exciting coil,

wherein the length of the exciting coil at the inner peripheral portion along the direction of the rotation axis of the supporting roller is not longer than the width of the fixing belt and is not shorter than the width of a recording material having the maximum width in all the recording materials to be used.

59. (New)An image heating device comprising:

a fixing belt having conductivity;

a supporting roller movably suspending the fixing belt;

an exciting coil arranged in opposition to the peripheral surface of the fixing belt and adapted for allowing the fixing belt to generate heat with electromagnetic induction; and

a core made of magnetic material arranged on a rear side of the exciting coil,

wherein the core has opposing portions opposed to the supporting roller without interposing the exciting coil between the opposing portion and the fixing belt, and magnetic permeable portions opposed to the fixing belt via the exciting coil, and

wherein the length between the outermost ends of the opposing portion along the direction of the rotation axis of the supporting roller is not longer than the width of the fixing belt and is not shorter than the length of the exciting coil at the inner peripheral

portion along the direction of the rotation axis of the supporting roller; and the width of a recording material having the maximum width in all the recording materials to be used is not longer than the length of the exciting coil at the inner peripheral portion along the direction of the rotation axis of the supporting roller.

60. (New)The image heating device according to claim 56, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the fixing belt.

61. (New)An image forming apparatus comprising:

an image forming means for forming an unfixed image onto a recording material and having the unfixed image carried thereon;

a fixing device for fixing the unfixed image onto the recording material; and

an image forming apparatus main body,

wherein the fixing device comprises a heat generating body that is rotatable and has electrical conductivity, an exciting coil arranged in opposition to the peripheral surface of the heat generating body and adapted for allowing the heat generating body to generate heat with electromagnetic induction, and a shielding member made of conductive material covering at least a part of the exciting coil, and

wherein the space between the exciting coil and the shielding member is smaller than the space between the exciting coil and the image forming apparatus main body.

62. (New)The image forming apparatus according to claim 61, wherein the space between the exciting coil and the image forming apparatus main body is 20 mm or more.

63. (New)The image heating device according to claim 45, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

64. (New)The image heating device according to claim 46, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

65. (New)The image heating device according to claim 47, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

66. (New)The image heating device according to claim 50, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

67. (New)The image heating device according to claim 51, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

68. (New)The image heating device according to claim 52, wherein the heat generating body is at least one selected from the group consisting of a heat-generating

roller and a fixing belt.

69. (New)The image heating device according to claim 53, wherein the heat generating body is at least one selected from the group consisting of a heat-generating roller and a fixing belt.

70. (New)The image heating device according to claim 45, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

71. (New)The image heating device according to claim 46, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

72. (New)The image heating device according to claim 47, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

73. (New)The image heating device according to claim 50, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

74. (New)The image heating device according to claim 51, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

75. (New)The image heating device according to claim 52, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

76. (New)The image heating device according to claim 53, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the heat generating body.

77. (New)The image heating device according to claim 57, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the fixing belt.

78. (New)The image heating device according to claim 58, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the fixing belt.

79. (New)The image heating device according to claim 59, wherein the exciting coil is arranged in opposition to the outer or inner peripheral surface of the fixing belt.